

Notice of Allowability	Application No.	Applicant(s)	
	10/662,782	DUNCAN ET AL.	
	Examiner	Art Unit	
	Jeremy S. Cerullo	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Appeal Brief filed on 21 April 2006.
2. ☒ The allowed claim(s) is/are 1,3-14 and 16-22.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input checked="" type="checkbox"/> Other <u>PTO-413B.</u> |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mark Scott on 5 June 2006.

The application has been amended as follows:

Claim 1 should appear as follows:

1. A method comprising:

periodically stalling issuance of input/output (I/O) device accesses by a program in a multiple-processor computer system by entering an interrupt mode by each processor in the multiple-processor system; and during the stalling step completing pending I/O device reads.

Cancel Claim 2.

Claim 3 should appear as follows:

3. The method as defined in claim 1 wherein entering an interrupt mode further comprises entering the interrupt mode by each of the processors substantially simultaneously.

REASONS FOR ALLOWANCE

2. The following is an examiner's statement of reasons for allowance:
3. In light of the applicant's remarks in the Appeal Brief filed on 21 April 2006 and the examiner's amendment above, Claim 1 is considered to be allowable, particularly due to the limitation that the method comprises stalling the issuance of I/O device accesses by entering an interrupt mode by each processor in the multiple processor system until pending I/O device reads are completed. This limitation, when considered with the rest of the claim, distinguishes the invention from the prior art of record.
4. Claims 3 and 4 are considered to be allowable based on their dependence upon Claim 1.
5. Claim 5 is considered allowable, particularly due to the limitation that the allowing each processor to resume issuing device accesses comprises asserting a resume flag within each processor by a primary processor. This limitation, when considered in combination with the rest of the claim, distinguishes the invention from the prior art of record.
6. Claims 6-7 are considered allowable based on their dependence upon Claim 5.

7. In light of the applicant's remarks in the Appeal Brief filed on 21 April 2006, Claim 8 is considered to be allowable, particularly due to the limitation that each of the processor periodically executes a program to cease issuance of I/O device writes until pending I/O device reads are completed. This limitation, when considered with the rest of the claim, distinguishes the invention from the prior art of record.

8. Claim 9 is considered allowable, particularly due to the limitation that the some of the plurality of processors in the system resume issuance of device writes upon the assertion of their flag registers. This limitation, when considered in combination with the rest of the claim, distinguishes the invention from the prior art of record.

9. Claims 10-13 are considered allowable based on their dependence on Claim 9.

10. Claim 14 is considered allowable, particularly due to the limitation that there is a primary processor that is programmed to allow the system to resume the issuance of device writes after pending reads are complete. This limitation, when considered in combination with the rest of the claim, distinguishes the invention from the prior art of record.

11. Claim 16 is considered allowable, particularly due to the limitation that the processor resumes production of device writes when the flag register in the port logic is asserted. This limitation, when considered in combination with the rest of the claim, distinguishes the invention from the prior art of record.

12. Claim 17 is considered allowable, particularly due to the limitation that a primary processor issues read commands to each of the bus bridges during the interrupt mode. This limitation, when considered in combination with the rest of the claim, distinguishes the invention from the prior art of record.

13. Claim 18 is considered allowable based on its dependency on Claim 17.

14. In light of the applicant's remarks in the Appeal Brief filed on 21 April 2006, Claim 19 is considered to be allowable, particularly due to the limitation that each of the means for executing periodically executes a program to cease issuance of writes until pending transactions are completed. This limitation, when considered with the rest of the claim, distinguishes the invention from the prior art of record.

15. Claim 20 is considered allowable, particularly due to the limitation that the means for executing resume issuance of writes upon the assertion of their means for triggering. This limitation, when considered in combination with the rest of the claim, distinguishes the invention from the prior art of record.

16. Claims 21-22 are considered allowable based on their dependence on Claim 20.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably


accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy S. Cerullo whose telephone number is (571) 272-3634. The examiner can normally be reached on Monday - Thursday, 8:00-4:00; Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rehana Perveen can be reached on (571) 272-3676. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


JSC


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6/6/06